



UNITED STATES PATENT AND TRADEMARK OFFICE

11A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,095	02/27/2004	Yoshinori Hayashi	249422US2	4266
22850	7590	08/29/2006		
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER ROBINSON, MARK A	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/787,095	HAYASHI ET AL.	
	Examiner	Art Unit	
	Mark A. Robinson	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9,23 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9,23 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/2/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/7/06 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the scanning lenses arranged in different layouts must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.

Art Unit: 2872

The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-3,5-9,23 and 27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement

Art Unit: 2872

requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1,6,23 and 27 recite the scanning lenses proximate to the target surfaces to be "arranged in different layouts."

However, any such arrangement of these lenses is not shown or explained in the specification and drawings. The lenses shown in the drawings (e.g. 6A,6A') which correspond to the claimed scanning lenses appear to be in the same basic layout (see fig. 2). Further, the only portion of the specification referring to this feature appears to be in the second full paragraph of page 15 which states that these lenses "may also have different arrangement formations from each other."

However, any specifics of such an arrangement are not disclosed. Thus, the claims do not satisfy the enablement requirement since the ordinarily skilled artisan would have to guess what is specifically meant by "arranged in different layouts."

With further regard to claims 6 and 27, the disclosure does not provide support or enablement for the arrangement wherein the scanning lenses are in different layouts and "are rotated about an optical axis by 180 degrees oppositely from each other" as claimed. The claimed scanning lenses necessarily refer to

Art Unit: 2872

either the pair 6A and 6A' OR the pair 6B and 6B' since the beams associated with the claimed lenses must be received by a (single) photodetector. Thus, the claimed scanning lenses may not be encompassed, for example, by lens 6A and lens 6B since the associated beams would not be incident upon a (single) photodetector as claimed. Accordingly, there is no support for the claimed scanning lenses to be rotated by 180 degrees as set forth in claim 6 and 27.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 calls for the scanning lenses to have a same shape as each other.

However, this appears to contradict claim 1 from which claim 6 depends, since claim 1 calls for these lenses to "have optical actions different from each other." It is not clear how

Art Unit: 2872

these lenses could have different "optical actions" but yet have the same shape.

Inasmuch as the claims are able to be understood in light of the 112 rejections made above, the following rejection(s) apply:

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3,5-9,23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima (US 6052211) in view of Hinton (US 5450119).

Regarding claims 1,3,6-9 and 23, Nakajima discloses a scanner including plural integrated light sources(11,12) emitting spatially separated beams, a deflector(15) shared by beams from the light sources, a scanning optical system with at least two scanning lenses (either 18 and 19 or 18 and 16a), a photodetector (either 32 or 34) which receives the beams

Art Unit: 2872

deflected at the deflector, wherein the beams traveling toward the deflector have an open angle θ in a deflecting rotation plane, a scanning lens(18) proximate to one of the target surfaces passes only the beams traveling toward one of the target surfaces, and scanning lenses proximate the target surfaces, configured to guide beams to different target surfaces, have optical actions different from each other (18 and 16a have different surfaces resulting in different "optical actions"; alternatively, 18 and 19 direct the respective incident beams in different directions which constitute different "optical actions") and are arranged in different layouts (18 and 16a have different positions and orientations; 18 and 19 have different positions and orientations). Regarding claim 27, Nakajima discloses scanning lenses arranged 180 degrees relative to each other (e.g. 18 and 21).

Nakajima does not disclose a coupling optical system and a line image focusing optical system (Nakajima only shows generic light sources 11-14) as in claim 1,23 or 27. However, such features are commonly found in scanning systems and an example is shown by Hinton as discussed in the previous office action (e.g. note the lenses between source 36A and deflector 40). It would have been obvious to the ordinarily skilled artisan at the time of invention to include such features in Nakajima's system

Art Unit: 2872

in order to properly form the line images and couple the beams as would be required for proper scanning of the photosensitive surfaces 28-31 shown by Nakajima.

Regarding claims 2,5 and further regarding claim 27, Nakajima does not explicitly disclose the curvatures for the scanning lenses as claimed. However, scanning lenses with these profiles are well known in the art. It would have been obvious to the ordinarily skilled artisan at the time of invention to use lenses with such curvatures in order to compensate for unwanted image curvature or other aberrations in the scan line, such considerations being readily apparent to those having ordinary skill in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Robinson whose telephone number is (571) 272-2319.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn, can be reached at (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 2872

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2800.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MR

8/22/06


MARK A. ROBINSON
PRIMARY EXAMINER